

DRAFT Sediment TMDL Road Management Outline

Mid Coast Implementation-Ready Sediment Total Maximum Daily Load: Road Network Desired Outcomes & Integrated Approach

This document describes the goals and requirements for reducing sediment pollution from road systems in the Mid-Coast basin under the Oregon Department of Environmental Quality's (DEQ's) Implementation-Ready Total Maximum Daily Loads (IR-TMDLs) for the basin. It provides an overview of the major road ownership/management types and describes the overarching framework for reducing sedimentation from roads in the Mid Coast basin.

The intent of this portion of the sediment IR-TMDLs is to (a) prevent chronic or frequent introduction of fine sediment from the road network into waters of the state and (b) to reduce the risk of episodic sediment introduction from roads that were constructed using methods and/or in locations that may fail catastrophically and be problematic for water quality. DEQ's road approach, which includes assessment and management measures, applies to all land uses. However, in recognition of existing regulatory regimes and inherent differences in management methods and use patterns, there are detailed Road Management Approaches for three road sectors: Forestry, Agriculture, and Public Roads (i.e. state highways and county and municipal roads).

All land management sectors contain existing road segments or features that represent a risk of anthropogenic sediment delivery to waters of the state in the MidCoast Basin. Since all road-related sediment delivery to waters of the state is necessarily from anthropogenic sources, this category of sediment is a concern for attainment of water quality standards and resource protection and therefore should be minimized to the maximum extent practicable. This program has measures to identify roads that are considered at risk of delivering sediment or turbidity to waters of the state, to bring the road network to a level of performance that is consistent with TMDL goals and objectives, and thereby reduce and prevent water quality impacts and protect beneficial uses.

Sediment TMDLs Goals & Objectives

Water Quality Goals

- No more than 10% increase in turbidity due to roads at relevant compliance points, e.g. downstream of crossing structures or due to road-related landslides (Turbidity Standard: OAR 340-041-0036).
- No impairment of aquatic life and drinking water use due to anthropogenic sedimentation (Biocriteria, Potability of Drinking Water, and Sediment narrative standards: OARs 340-041-0011, 340-041-0007(11), and 340-041-0007 (12), respectively).

Road Network Goals

- An efficient and beneficial road network that is located, designed, constructed, and managed in a manner that provides protection to water quality
- No exceedance of water quality standards due to roads, crossing structures, and their use by the public and commercial traffic.
- Hydrologically disconnected road network (to the maximum extent practicable) using available BMPs (including maintenance practices) and good design principles.

Road Network Objectives

- The road network should meet current requirements and guidelines of the relevant statutes and regulations (e.g. Forest Practices Act and rules for forestry roads and use, Agricultural Water Quality Management Act (SB 1010) Area Rules for agricultural roads, applicable state laws and county ordinances for state highways and county roads) as a basis for achieving water quality goals for sediment.
- Road maintenance operations are performed as needed including regular inspections and timely repair of storm damage.
- Any existing problem road locations are identified by landowner or manager by segments or features.
- Road system owner/operator will identify problems or risks from crossings, road prism failure, hydrology, and connectivity (specific problem/risk categories by land ownership/management can be found in the sector-based road approaches).
- Identified problems and risks in the road network are remediated according to TMDL timelines and milestones.
- Road system owner/operator will report actions taken by:
 - Category of problem or risk, and
 - Problem/Risk (by appropriate unit of measurement).

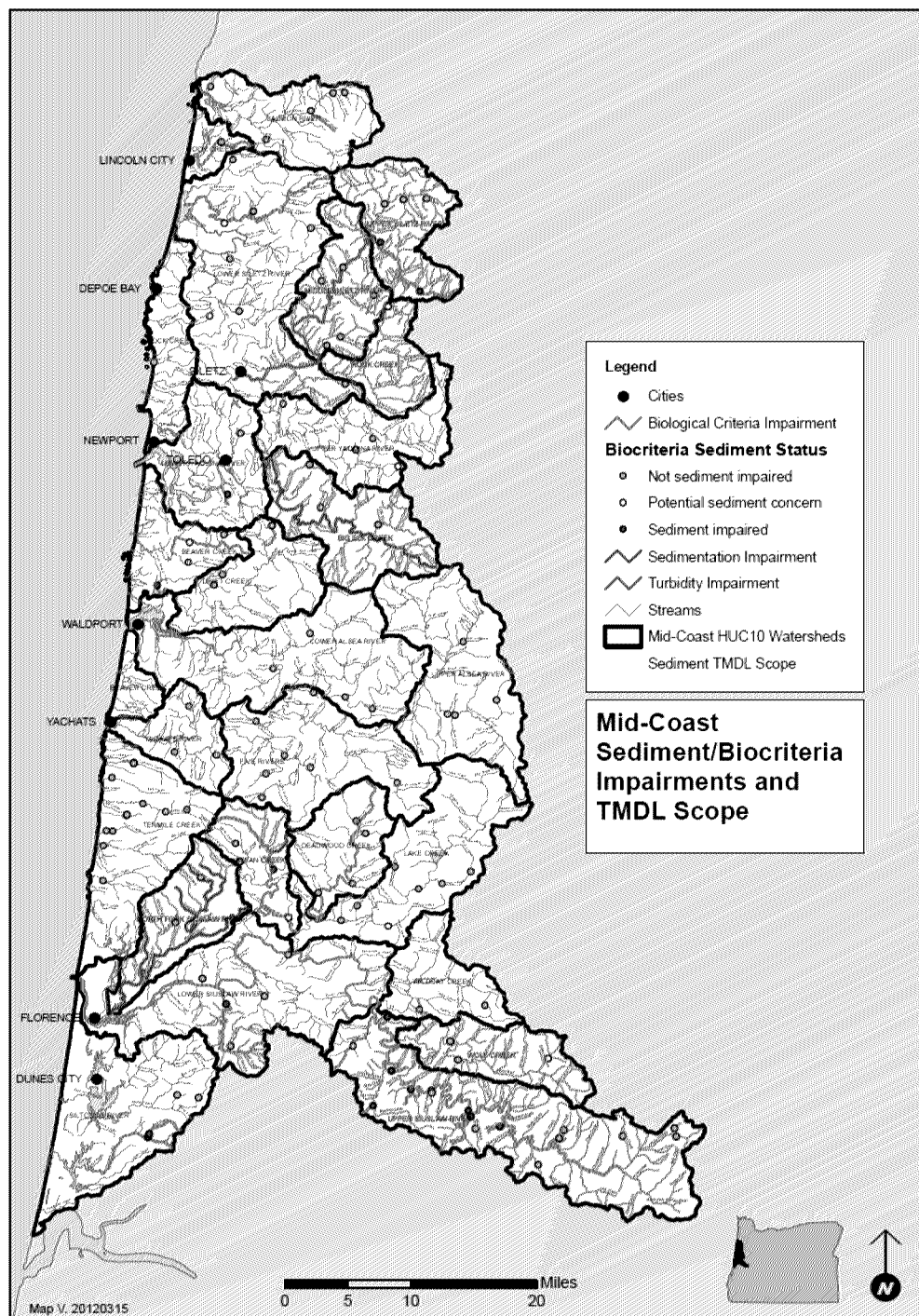
For each Problem/Risk, landowner will report;

- Initial Number;
- Number Completed in Current Year (total and number per 5th or 6th field Hydrologic Unit Code (HUC));
- Number Completed to Date;
- Percent Completed to Date;
- Number Remaining to Complete;
- Number Expected to be Completed in Upcoming Year (total and number per 5th or 6th field HUC).

Reporting on a project-by-project basis may be possible through the Oregon Watershed Enhancement Board's Oregon Water Resources Inventory (OWRI) reporting mechanism. This would allow DEQ to download data as a means of getting yearly reporting from landowners. The OWRI system would need minor modifications; DEQ will work with OWEB.

Geographical Scope of IR-TMDL

The sediment portion of the Implementation-Ready Total Maximum Daily Load (IR-TMDL) load allocations and management measures apply to the areas identified on the 2010 303(d) list and the areas with identified biocriteria impairments associated with excess sedimentation. These areas are shown on the map below. The requirements of the IR-TMDL for sediment do not apply to the remainder of the Mid-Coast basin, but DEQ encourages implementation and the use of this approach basin-wide.



Process Outline:

Stratify roads by risk type → Categorize risk/impact → Identify BMPs → Implement BMPs

Process Example from Forest Roads proposal:

1. Develop a working definition of the “universe” of roads, based on rules, literature, & other sources.
2. Develop a set of criteria to determine which roads/segments have potential to deliver sediment to streams, based on the characteristics of roads and road segments.
3. Rank these roads or segments according to risk of delivery (e.g., high, med, low), based on the characteristics and screening criteria developed.
4. Develop reporting metrics needed to establish pre-Oregon Plan baseline & current situation. Outline potential implementation approaches in the Mid Coast Basin in an adaptive management context.
5. For those roads/road segments reported as having potential sediment delivery, identify BMPs to be used to resolve the issue. (List of BMPs: transportation management, vacation/obliteration, etc....)

Components:

- All road network owners/managers will be required to identify sediment delivery locations or road locations/features that are at risk of failure and delivery to waters of the state. A summary of that data will need to be submitted. Inventories done under the Oregon Plan for Salmon and Watersheds can be submitted and used as the baseline for purposes of compliance with milestones, although an updated inventory will be required as well.
- Along with inventory summary, road managers will need to submit a plan that projects when the problems and risks will be remediated in a manner that meets the milestones in the implementation timeline (Table 1).
- The TDML will include Best Management Practice (BMP) references as options for managing and remediating problems and risks. Use of these BMPs will constitute the approved implementation activities under the TMDL. Alternate BMPs are allowable if the owner/manager demonstrates to DEQ that these will likewise accomplish the water quality goals.
- Annual reporting will be required in order to summarize the work done over that year on the problems/risks identified, the total work done, and the work remaining (See “Objectives” above. The data, timelines, and the BMPs included in the TMDL will be developed and selected in consultation with stakeholders and/or outside experts. Mechanisms to facilitate reporting (possibly through OWRI) will be explored.

Table 1: Implementation Timeline & Milestones

Calendar Year	TMDL Year	Action Milestone
2013	0	TMDL Approved
2015	2	Inventory & Assessment Under Way; Start Road Work
2017	4	Inventory & Assessment Completed; Improvement & Removal Plan Submitted
2019	6	-
2021	8	25% of Plan Work Completed
2023	10	-
2025	12	50% of Plan Work Completed
2027	14	-
2029	16	75% of Plan Work Completed
2031	18	-
2033	20	100% of Plan Work Completed

The three road sector approaches (Forestry, Agriculture, and Public Roads) will share the above described components. However, the specific means to accomplish those components (initial data, projected work, reporting, BMPs & implementation) will be tailored to the management practices, land use needs, particular water quality impacts/risks, and regulatory structure of the sector. For example, the Forest Roads Approach will have BMPs to address roads built using sidecast construction on steep slopes; agricultural roads will generally not have this risk, but operators will need to address rainy season use of inadequately surfaced roads near to surface water similarly to forest road system operators. Therefore, the three sector-based approaches will have issues in common as well as issues unique to a particular sector. The timeline and milestones will be common to all three approaches. Public roads, agricultural roads, and forest roads are all expected to meet water quality goals and road network goals and objectives.

Clarification of Responsibility:

Generally, the owner or designated land manager/land management agency is responsible for compliance with the requirements of this TMDL, and the applicable road sector approach is determined by land use. Some cases of ambiguity exist as to which sector some roads belong. Examples include driveways and private roads in subdivisions and similar developments. Driveways are to be covered under the Agricultural Roads Management Approach. Private roads in subdivisions and similar cases that do not qualify as driveways will be covered under the Public Roads Management Approach through

county authorities. Financial responsibility would rest with the party who is legally responsible for maintenance of those private roads.

There will also be cases where one party owns the land, and another party owns a right-of-way on that land. If responsibility is unclear (i.e. no agreements exist on who is responsible for road maintenance, and established laws do not assign responsibility), then the owner of the right-of-way is the default responsible party for road maintenance and upgrades.

Following this introduction, there are three sector-based Road Approaches. These Approaches constitute the load allocation surrogates and required management measures for the roads component of the Mid Coast Sediment TMDLs.